Patent claims

1. Method for transmitting data in a multi-carrier system to which a frequency band is assigned, for which the carrier frequencies are subdivided into at least one sub-carrier band dividing the frequency band, characterized in that, on the send side, depending on the current transmission characteristics, an adaptive pre-emphasis of the send signal is undertaken for a part of the carrier frequencies of the sub-carrier band, that it actually relates only to this part of the carrier frequencies of the sub-carrier band.

2. Method in accordance with Claim 1, characterized in that pre-emphasis is undertaken by a filtering and/or a windowing in the time and/or frequency range.

3. Method in accordance with Claim 1 or 2, characterized in that the filtering is undertaken by a signal filter, which exhibits essentially high filter rates of change in the frequency range.

4. Method in accordance with one of the Claims 1 to 3, characterized in that, for filtering and/or windowing a "Blackman", "Bartel", "Kaiser", "Papoulis" or comparable window function is used which is embodied such that the windowing is executed in the time range and with an oversampling preferably being used to achieve high filter rates of change in the frequency range.

5. Method in accordance with one of the previous claims, characterized in that the multi-carrier system is used in combination with an "FDMA" (Frequency Division Multiple Access) method, especially the "OFDMA" (Orthogonal Frequency Division Multiple Access) method.

6. Method in accordance with one of the Claims 1 to 5 , characterized in that the pre-emphasis is limited to carrier frequencies in edge areas of the sub-carrier which is preferably assigned to one user, especially bordering on other sub-carrier bands.

7. Method in accordance with one of the previous claims, characterized in that value of a first symbol duration assigned to one of the emphasized carrier frequencies remains the same, with, especially with time range windowing or filtering or the folding operation in the frequency range, the overall length of the time range window $\omega_{(k)}$ not exceeding the OFDM symbol duration i.e. the OFDM useful symbol duration as well as the duration of the cyclic prefix and the necessary rate of change of the sub-carriers is essentially determined by the oversampling.

9. Transmit device for transmitting data in a multi-carrier system to which a frequency band is assigned, of which the carrier frequencies are subdivided into at least one sub-carrier band subdividing the frequency band, characterized by

a) means for determining current transmission characteristics,
b) means for pre-emphasis of a part of the carrier frequencies of the sub-frequency band of the send signal, which is undertaken adaptively such that the pre-emphasis actually relates only to this part of the carrier frequencies of the sub-carrier band.